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Reducing Depression among Older Adults: Informal Helping versus Volunteering

Salih Salihoglu
University of Kentucky, salih.salihoglu@uky.edu

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Abstract

Volunteerism is an unpaid productive activity that is exercised within a formal organization to benefit others that are not part of family or friends (Musick & Wilson, 2008). Alternatively, individuals could engage in informal helping which would be an activity undertaken outside a formal, structured organization. This paper addresses whether informal helping is also effective in reducing depression for older adults alongside volunteering. I hypothesize that informal helping is effective in reducing depression only when exercised for short durations. On the other hand, I hypothesize that volunteerism is only effective when exercised for long periods of time. I try to measure the impact of informal helping and volunteering on depression and compare the results depending on the number of hours that people spent informally helping or volunteering. The results show that volunteering in general reduces depression going forward, at least at higher levels of volunteering, while helping reduces depression only at lower levels.

Salih Salihoglu

Martin School of Public Policy and Administration

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Introduction

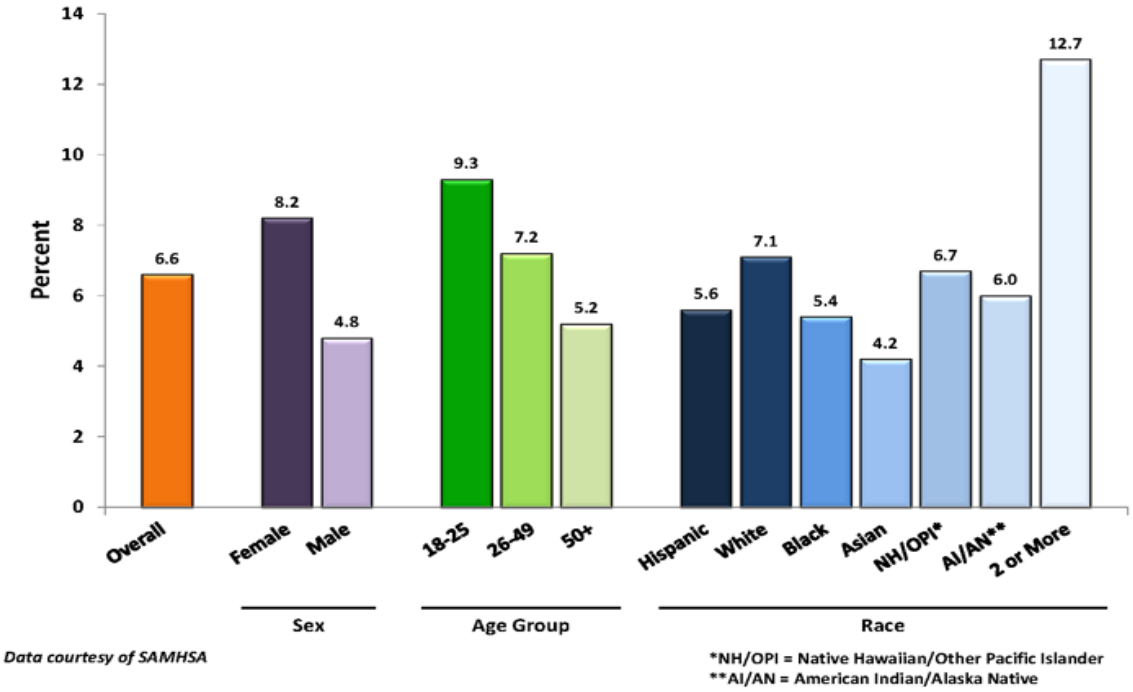
Depression is one of the most common mental illnesses in the world. Many teenagers, adults and elderly people are affected by depression in their daily lives. Some of the effects in the lives of individuals can be loss of productivity in the workplace, being unsuccessful at school, or feeling powerless to cope with daily problems. Even though there are many ways to treat and deal with depression, the illness can lead to individuals committing suicide.

Depression is a condition of low disposition and antipathy to any activity that may influence somebody's feelings, thoughts and behaviors. Essentially, depression can be defined as a critical and widespread medical disease that influences how people feel, think and behave (DSM-5, 2013). People who are dealing with depression feel upset, lonely, hopeless or valueless. They may have some trouble with communicating with other people, focusing, or making decisions.

According to the National Survey on Drug Use and Health (NSDUH), in 2014, 6.7 percent of all adults aged 18 or older living in the United States had at least one depressive incident in the prior year. The Center for Disease Control and Prevention (CDC) discusses depression in terms of emotions like desperation, remorse, and sadness leading to a diagnosis in nearly nine percent of American adults, while three percent will experience major depressive disorder at some point in time (CDC, n.d.). Major depressive disorder is an enduring and more severe version of depression.

The following graph (Figure 1) breaks down the annual percentage of depressive incidents in adults in the United States according to certain demographic groups: sex, age, and race.

Figure 1: 12 –month Prevalence of Major Depressive Episode among U.S. Adults (2014)



Data Source: Substance Abuse and Mental Health Services Administration, 2014,
Retrieved from http://www.nimh.nih.gov/health/statistics/prevalence/major-depression-among-adults.shtml

In terms of demographic differences, there are a few points to note. More women than men experience major depressive disorder (Journal of the American Medical Association, 2003). The incidence of depression also varies by age group. While one out of 33 children may experience depression, one out of eight teenagers could be considered clinically depressed (Center for Mental Health Services, U.S. Dept. of Health and Human Services, 1996). In older adults, nearly six million people deal with depression later in life; however, treatment levels are low at ten percent (Brown University Long Term Care Quarterly, 1997). Among U.S. families providing care to an elderly relative, a survey found that 58% of the elderly adults in their care

demonstrated symptoms of depression that could be considered clinically significant (Family Caregiver Alliance, 1997). The problem of depression in the United States is quite large, and the impact of this mental health issue does affect society at large.

It has long been documented that civic engagement is beneficial for older adults. One aspect of civic engagement is volunteering. While it is beneficial for many reasons, improved health outcomes are more prevalent than other benefits (Piliaving & Siegl, 2007). Participating in volunteer activities is more beneficial to adults than younger generations (Van Willigen, 2000). Long term physiological benefits to well-being are apparent only among adults (Kim &Pai, 2008). The bulk of the literature suggests that volunteering is effective in life satisfaction, battling depressive symptoms, and building self-esteem (Musick &Wilson, 2008; Hong & Morrow-Howell, 2010; Wilson, 2012).

Volunteerism is an unpaid productive activity that is exercised within a formal organization to benefit others that are not part of family or friends (Musick & Wilson, 2008). Alternatively, individuals could engage in informal helping which would be an activity undertaken outside a formal, structured organization. However, focusing more on formal volunteering may diminish the importance of informal helping (Morrow-Howell, 2010). So far, it is unknown whether informal helping has similar physiological benefits compared with volunteering or not. Moreover, the literature is insufficient to explain how much time spent on volunteering or informal helping is necessary to receive tangible health outcomes.

The current study will contribute to the literature by testing for effects of/the predictive power of informal helping and volunteering on/for depressive symptoms. Volunteerism and informal helping are entered in different durations to see what amount of volunteering or informal helping is best for older adults. At first, I elaborate the mechanisms by which informal

helping and volunteerism may combat depressive symptoms. Second, I present a detailed description of the data set and operationalization of the variables.

This paper addresses whether informal helping is also effective in reducing depression for older adults alongside volunteering. I hypothesize that informal helping is effective in reducing depression only when exercised for short durations. On the other hand, I hypothesize that volunteerism is only effective when exercised for long periods of time.

Research Question

In this study, I try to measure the impact of informal helping and volunteering on depression and compare the results depending on the number of hours that people spent informally helping or volunteering. Finally, I will answer the following question: "Is informal helping a better option than volunteering in reducing depression among older adults?"

Li and Ferraro (2005) contend that the benefits of informal helping may well be seen in short lengths of helping, that is, short hours of helping decrease depression. However, as the length of helping increases the relationship becomes insignificant or positive, that is, informal helping may increase the level of depression. They argue that since the informal helping happens in close relationships, fatigue is more likely due to a lack of recognition for this work and a greater sense of obligation to complete the work for friends or family.

On the other hand, duration of volunteering is also important. Benefits of volunteering may not be observed at lower levels of volunteering. Those who volunteer more hours are usually the ones that have a higher commitment to volunteering and are more internally motivated. Thus I argue that although benefits of volunteering may not be observable at lower

rates, as the individuals keep up their volunteering effort, they will see the positive effects of volunteering in the long run.

Literature Review

Volunteerism and informal helping are different concepts. Participating in a volunteer activity in an organization, for example volunteering at church, falls under this category. However, volunteerism is not to be confused with informal helping, which is about carrying out activities to help friends, relatives or neighbors where the person has a closer relationship. Unlike volunteering, informal helping is not carried out under a formal organization (Wilson and Musick, 1997). For example, helping friends with homework, providing transportation to relatives, and taking care of a neighbor's child without pay fall under the informal helping category.

There are multiple mechanisms by which volunteerism may bolster physiological well-being. Generally speaking, the literature can be grouped into two categories: self-concept and social integration (Musick & Wilson, 2008; p. 494-495). The self-concept argument is about how volunteers think about themselves after the volunteer activity. Volunteers feel good about themselves and express they have made a difference (Musick & Wilson 2008). For example, volunteering bolsters self-esteem (Fraser, Clayton, Sickler, & Taylor, 2009; Thoits & Hewitt, 2001) and protects from stress (Mojza, Lorenz, Sonnentag & Binnewies, 2010). Cohen (2009) reports that volunteers feel good about themselves.

The self-concept perspective is also linked to the role enhancement argument. The theory suggests that volunteer activity enhances the roles of volunteers in society, especially for later periods of life when social roles are being lost (Hao, 2008). For example, Li (2007) showed that

after the loss of a spouse, engaging in volunteer activity decreases the risk of depressive symptoms. This effect is stronger for the bereaved spouses than others (Brown, Brown, House, & Smith, 2008). Choi and Bohman (2007) examine the combinations of work and volunteering and their effects on depressive symptoms for older men and women. They found that, in reference to the older adults who volunteer or work, those who engage in volunteering, working, or both, report fewer depressive symptoms. The effect is the strongest for the category who only volunteer but do not work.

The social integration argument also explains why volunteering may increase mental wellbeing. Volunteering enlarges a volunteer's networks and makes the person meet with others. The social relations are usually emotionally sincere and positive (Wilson and Musick 2008). The rationale is that volunteering is an opportunity for people to make more friends and having more friends makes them feel better. However, benefits from making friends through volunteering will depend on motivation, although extrinsically motivated individuals may have an increase in their number of friends, only the intrinsically motivated volunteers gain quality friends (Wilson, 2012). For example, Degli Antoni (2009) found that while volunteers who volunteered for social recognition or to be useful to others did not have new and supportive friends, those who volunteered for values acquired more friends. Feelings of attachment to these friendships are more important to older people than younger adults. Hendrisks and Cutler (2004) showed that elderly people only maintain the volunteer roles to which they feel emotional attachment.

It is important to note that volunteerism may not always bring physiological benefits. Volunteering for excessive hours may have inverse effects on health. There are many studies that show the effect of volunteering decreases after a threshold (Grimm, Spring, & Dietz, 2007). Scholars also observed that depression is found to be common among HIV caregivers (Ironson

2007) and emotional suffering is seen among disaster volunteers (Thormar et al., 2010). This may indicate that the field of volunteering could also impact the outcome on levels of depression.

In previous literature, there has not been much effort to explain the link between informal helping and health benefits. Krause et al (1992) argue that in an informal helping setting, informal help providers are able to observe the positive outcomes of helping promptly, and the helper realizes that a similar approach may solve his or her own problems. However, Li and Ferraro (2005) discuss that since informal helping occurs within close relationships, helping others is less likely to be recognized. They discuss that besides less recognition, long hours of helping will be detrimental to the informal help providers. Thus, they argue that beneficial effects of helping may not be apparent in informal helping.

To my knowledge, these are the only two studies that test the concurrent effect of volunteering and informal helping on depression. Krause et al (1992) find that while informal assistance to others bolsters feelings of personal control, volunteering has no significant effect. Greater levels of control then lead to lower levels of depressive symptoms. The study is cross sectional and does not test the long-term effects of informal helping. Li and Ferraro (2005) use the first three waves of the same data set to investigate the relationship. Unlike Krause et al (1992), Li and Ferraro (2005) actually found no relationship between depression and informal helping.

This study contends that the benefits of informal helping may well be seen in short lengths of helping, that is, short hours of helping decrease depression. However, as the length of helping increases the relationship becomes insignificant or positive, that is, informal helping increases the level of depression.

Hypothesis 1a: A short duration of informal helping is effective in decreasing the symptoms of depression.

Hypothesis 1b: A long duration of informal helping is either less effective in decreasing the symptoms of depression or has no effect on the level of depression.

On the other hand, duration of volunteering is also important. Benefits of volunteering may not be observed at lower levels of volunteering. Those who volunteer more hours are usually the ones that have a higher commitment to volunteering and are more internally motivated. Thus, I argue that although benefits of volunteering may not be observable at lower rates, as the individuals keep their volunteering effort, they will see the positive effects of volunteering in the long run.

Hypothesis 2a: A short duration of volunteering is either less effective in decreasing the symptoms of depression or has no effect on the level of depression.

Hypothesis 2b: A long duration of volunteering is effective in decreasing the level of depression.

Data

The study uses a dataset from the 2010 and 2012 Health and Retirement Study (HRS) surveys. The University of Michigan HRS is a longitudinal panel study that surveys a representative sample of about 20,000 people over the age of 50 in the USA. It is supported by the National Institute on Aging and the Social Security Administration. The sample selection and distribution

process was conducted by the Social Science Institute of the University of Michigan. Because of missing values, the sample size decreased to 12,583 in the model.

Methodology and Data Measurement

Outcome Measure

Using the HRS dataset, I created a depression index using an 8 item short version of the CESD (Center for Epidemiologic Studies Depression Scale) index (Turvey, Wallace &Herzog, 1999). As for the depression variable, the HRS questionnaire asked, "Now think about the past week and the feelings you have experienced. Please tell me if each of the following was true for you most of the time during the past week." The items are listed as a) you felt depressed. b) you felt that everything you did was an effort c) your sleep was restless d) you were happy e) you felt lonely f) you enjoyed life g) you felt sad and h) you could not get going. Items d and f were reverse coded. Participants can answer these questions in four answer categories: 1=Yes, 5=No, 8=Don't know and 9=Refused. Higher scores in depression variable indicate higher depressive symptoms.

Volunteerism Measure

As for the volunteerism variable, the respondents were asked: "Have you spent any time in the past 12 months doing volunteer work for religious, educational, health-related or other charitable organizations?" For the informal helping variable, respondents were asked: "Have you spent any time in the past 12 months helping friends, neighbors, or relatives who did not live with you and did not pay you for the help?" For both of questions, three follow up questions were asked as, "Altogether, would you say the time amounted to less than 100 hours, more than 100 hours or what?", "Would it be less than 200 hours, more than 200 hours or what?", and

“Would it be less than 50 hours, more than 50 hours or what?” respectively. Modifying these questions, I have created five categories for both variables which have been dummy coded: none, 1–49 hours, 50–99 hours, 100–199 hours, 200 hours or more.

Control variables

The variables that have been found to have a significant relation to depression in volunteering studies have been included in the model (Krause et al. 1992; Musick &Wilson, 2003; Thoits &Hewitt, 2001; Li &Ferraro, 2005). These are religious attendance, informal social integration, gender, race, marital status, age, education and employment.

As for the religious attendance variable, the question asked, "About how often have you attended religious services during the past year?" The answers are coded as "0" for "not at all", 1 for "more than once a week", 2 for "once a week", 3 for "two or three times a month", and 4 for "one or more times a year”. As for the informal social integration, the survey asked, "how often do you do each of the following with any of your friends, not counting any who live with you?" The categories are a) meeting up with friends and b) speaking on the phone. The scale of these variables are coded as 1 for "less than once a year or never", 2 for "once or twice a year", 3 for "every few months", 4 for "once or twice a month", 5 for "once or twice a week", and 6 for "three or more times a week."

As for race, white is dummy coded. Education is the years of education starting from 0 to 17. For gender, female is dummy coded. Marital status coded as married being 1 and non-married being the reference group. Employment variable is also dummy coded if the participant is employed. Age is measured by how old in years a person is.

Causality

The direction of causality between volunteer activities, informal helping and depression is complex. Each affects the other at a given time, such as 2010 or 2012. That makes a regression based on cross section data impossible to interpret clearly. Fortunately, the data here permit a change in depression score to be defined. I use a value-added model to assess the relationship between volunteerism and depression, controlling for the demographic and social interaction factors. Volunteers and informal help providers are compared to non-volunteers or non-helpers in 4 dummy coded categories: 1–49 hours, 50–99 hours, 100–199 hours, 200 hours or more.

The depression score in 2012 is regressed on the same score in 2010, to control for the previous level, and various activities which might affect the change to 2012. Depression is persistent but not perfectly fixed and fixing the coefficient of the previous level to be 1.0 is not appropriate. Given the control for 2010 level, the activities in 2010 are then related to the change from the persistence of 2010 level. This eliminates reverse causality except to the extent that activities in 2010 are based on anticipated changes from 2010 to 2012. If people correctly anticipate in 2010 that volunteerism will improve their mental states, which is the effect this research aims to estimate and is equivalent to seeking education in anticipation that the education will have beneficial effects. That is not reverse causality, it is good policy.

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
2012 depression	.194	.257	0	1
2010 depression	.192	.255	0	1
Volunteering 1-49 hours	.135	.342	0	1
Volunteering 50-99 hours	.082	.275	0	1
Volunteering 100-199 hours	.076	.266	0	1
Volunteering 200 hours or more	.063	.243	0	1
Informal helping 1-49 hours	.272	.445	0	1
Informal helping 50-99 hours	.126	.331	0	1
Informal helping 100-199 hours	.076	.265	0	1
Informal helping 200 hours or more	.052	.222	0	1
Religious attendance	1.801	1.436	0	4
Informal interaction	.370	1.252	0	6
Informal interaction missing	.914	.280	0	1
Female	.560	.496	0	1
Married	.598	.490	0	1
Age	65.618	11.967	18	109
White	.740	.439	0	1
Education	12.538	3.213	0	17
Employed	.361	.480	0	1

Empirical Results

Table 2: Regression Analysis

	2012depression
2010depression	0.565***
	(0.0105)
Volunteering 1-49 hours	-0.00674
	(0.00506)
Volunteering 50-99 hours	-0.0136*
	(0.00582)
Volunteering 100-199 hours	0.00108
	(0.00607)
Volunteering 200 hours or more	-0.0137*
	(0.00664)
Informal helping 1-49 hours	-0.00850*
	(0.00430)
Informal helping 50-99 hours	-0.0104
	(0.00554)
Informal helping 100-199 hours	0.00163
	(0.00677)
Informal helping 200 hours or more	-0.00418
	(0.00826)
Religious attendance	-0.00919***
	(0.00136)
Informal interaction	-0.00638*
	(0.00261)
Informal interaction missing	-0.0187
	(0.0120)
Female	0.0127***
	(0.00367)
Married	-0.0163***
	(0.00399)
Age	-0.000206
	(0.000225)
White	-0.00915
	(0.00484)
Education	-0.00530***
	(0.000658)
Employed	-0.0272***
	(0.00438)
Constant	0.225***
	(0.0222)
Observations	12583
R^2	0.377

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Volunteering in general reduces depression going forward, at least at higher levels of volunteering, while helping reduces depression only at lower levels. Coefficients for volunteering more than 50 hours is -0.013 and it is statistically significant. The result for 100 to 150 hours is probably just the infrequency of such a number of hours or Type II error. This indicates that, in reference to non-volunteers, volunteers are likely to show 1.3 percent less depressive symptoms. Coefficient for informal helping 1 to 49 hours is -0.0085 and it is significantly related to depression rate. This indicates that comparing non-helpers, helping 1 to 49 hours decreases depression by at around 0.85 percent.

The results are similar to those estimated in the same year, but those are biased by the fact that currently depressed individuals volunteer or help less, so the better estimates looking at changes have smaller effects. That is smaller, but not zero. Volunteering and helping still have effects after correcting for reverse causality.

The estimation shows that depression is persistent but not fixed. The lagged depression score has a coefficient of about 0.56, which is statistically far from both 0, which would be no persistence, or 1.0, which would be really depressing, as it would imply depression continues indefinitely. As is well known both professionally and popularly, depression continues but comes and goes, being far from fixed.

The results show that volunteering and helping reduce depression, although not by a large amount. Other factors reducing depression over time are employment, marriage, education, informal interaction, and religious attendance. Females tend to have higher depression and it becomes worse over time, other things equal.

One concern here is that informal interaction was not measured for many people, but a dummy variable controlling for that has no apparent effect, so selective reporting appears not to be a problem.

The regression corrects for heteroscedasticity because it is well known that mental state is subject to different levels of variance for different people. A statistical test shows that, but more importantly, it is a fact about mental state.

Conclusion

The results support the second hypothesis that volunteering for a small amount does not have significant effect on depression rate. Volunteering more than 50 hours decrease the level of depression. The results also support the first hypothesis that only short periods of informal helping decrease the level of depression. After more than 50 hours, informal helping is not statistically significant to decreasing levels of depression.

Informal helping and volunteering are not directly comparable to each other but the results have many implications. First of all, since both volunteering and informal helping is about devotion of time, the individual may have to make a choice between them. In the short run, helping a friend, relative or neighbor may decrease the level of depression. However, benefits of helping do not continue if informal helping continues for a long time. Because of this, in the long run, volunteering seems to be a better choice for older adults. To illustrate, let us create a scenario where an individual has three options: volunteering, informal helping, or neither informal helping nor volunteering. The model shows, as long as the individual has free time, volunteering or informal helping is in his or her best interest. If the individual has about 1 to 49

hours volunteering time to invest, helping a friend is a better option than volunteering. If the individual has more than 50 hours free time, then he or she will probably choose to volunteer.

However, the scenario doesn't illustrate the case where the individual distributes his time resource to both volunteering and informal helping. In reality, many older adults both volunteer and informally help others. The future research can plot a more sophisticated scenario is where time investment is made both to informal helping and volunteering. While volunteering may attract informal helping, informal helping may also increase the tendency for volunteering (Gallagher 1994; Wilson and Musick 1997). Moreover, to keep the study efficient, only the depression dimension of mental health has been analyzed in this study. The future may look at the effects of informal helping and volunteering on other dimensions of physiological wellbeing.

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